

Form PTO-1449

U.S. Department of Commerce
Patent and Trademark OfficeAtty. Docket No.
66512-A/JPW/GJGSerial No.
10/084,388INFORMATION DISCLOSURE STATEMENT
(Use several sheets if necessary)

Applicants

Stephan Kopytek and Virginia W. Cornish

Filing Date
February 25, 2002Group
1614

U.S. PATENT DOCUMENTS

M. Manich

Examiner Initial	Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate
MM	5 9 2 8 8 6 8	July 27, 1999	Liu et al.			
MM	5 7 3 6 3 4 3	April 7, 1998	Landry			
MM	5 4 6 8 6 1 4	Nov. 21, 1995	Fields et al.			
MM	5 3 1 4 8 1 7	May 24, 1994	Schultz, P.			
MM	5 1 9 4 5 9 4	March 16, 1993	Kwawli et al.			
	Document Number	Date	Country	Class	Subclass	Translation
						Yes No
MM	0 1 5 3 3 5 5	Jul 26, 2001	WO Pct			
MM	9 9 1 0 5 1 0	March 4, 1999	WO Pct			
MM	9 9 1 0 5 0 8	March 4, 1999	WO Pct			
MM	9 8 1 3 3 5 3	April 2, 1998	WO Pct			
MM	9 7 3 1 1 1 3	August 28, 1997	WO Pct			
MM	9 6 3 0 5 4 0	October 3, 1999	WO Pct			
MM	0 7 4 2 0 1 5	November 13, 1996	EP			
MM	Austin DJ, et al. Proximity versus allostery: the role of regulated protein dimerization in biology. 1994. Chem Biol. 1(3): 131-6 (Exhibit 13)					
MM	Belshaw PJ, et al. Controlling protein association and subcellular localization with a synthetic ligand that induces heterodimerization of proteins. 1996. Proc. Natl Acad Sci USA 93(10):4604-7 (Exhibit 14)					

EXAMINER

M. Manich

DATE CONSIDERED

7/8/01

*EXAMINER: Initial if reference considered, whether or not citation is made. Draw line through citation if not in conformance and not considered for communication to applicant.

Applicants: Stephan Kopytek and Virginia W. Cornish
U. S. Serial No.: 10/084,388
Filed: February 25, 2002
Group Art Unit: 1614

Exhibit A

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FOREIGN PATENT DOCUMENTS

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						Yes	No

mm Belshaw PJ, et al. Controlling programmed cell death with a cyclophilin-cyclosporin-based chemical inducer of dimerization. 1996. Chem. Biol. 3:731-738 (Exhibit 15)

mm Choi J, et al. Structure of the FKBP-12-Rapamycin complex interacting with the binding domain of human FRAP. 1996. Science 273(5272):239-42 (Exhibit 16)

mm DeGrado WF, et al. Screening, selection and design: standing at the crossroads in three dimensions. 1997. Current Opinion in Structural Biology 7:455-456 (Exhibit 17)

mm Diver SR, et al. Single-step synthesis of cell-permeable protein dimerizers that activate signal transduction and gene expression. 1997. J. Am. Chem. Soc. 119: 5106-5109 (Exhibit 18)

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FOREIGN PATENT DOCUMENTS

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						Yes	No

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

MM	Ho SN, et al. Dimeric ligands define a role for transcriptional activation domains in reinitiation. 1996. Nature. 382(6594):822-6 (Exhibit 19)
MM	Holsinger LJ, et al. Signal transduction in T lymphocytes using a conditional allele of Sos. 1995. Proc. Natl. Acad. Sci. USA 92:9810-9814 (Exhibit 20)
MM	Hung DT, et al. Understanding and controlling the cell cycle with natural products. 1996. Chem. Biol. 3:623-639 (Exhibit 21)

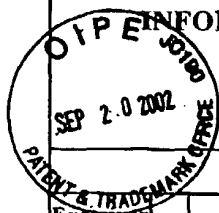
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Cornish

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FOREIGN PATENT DOCUMENTS

CUSTOM PATENT DOCUMENTS														
		Document Number							Date	Country	Class	Subclass	Translation	
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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

<i>mm</i>	Klemm JD, et al. Dimerization as a regulatory mechanism in signal transduction. 1998. Annu. Rev. Immunol. 16:569-92 (Exhibit 22)
<i>mm</i>	Liberles SD, et al. Inducible gene expression and protein translocation using nontoxic ligands identified by a mammalian three-hybrid screen. 1997. Proc. Natl. Acad. Sci. USA 94(15):7825-7830 (Exhibit 23)
<i>mm</i>	Licitra EJ, et al. A three-hybrid system for detecting small ligand-protein receptor interactions. 1996. Proc. Natl. Acad. Sci. USA 93:12817-12821 (Exhibit 24)

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													Yes	No

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MM	Pedersen H, et al. A method for directed evolution and functional cloning of enzymes. 1998. Proc. Natl. Acad. Sci. USA 95:10523-10528 (Exhibit 25)
MM	Pruschy MN, et al. Mechanistic studies of a signaling pathway activated by the organic dimerizer FK1012. 1994. Cbem. Biol. 1:163-172 (Exhibit 26)
MM	Schreiber SL. Chemical genetics resulting from a passion for synthetic organic chemistry. 1998. Bioorganic & Medicinal Chemistry 6:1127-1152 (Exhibit 27)

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MM	Spencer DM, et al. Controlling signal transduction with synthetic ligands. 1993. Science 262(5136):1019-1024 (Exhibit 28)
MM	Spencer DM, et al. Functional analysis of Fas signaling in vivo using synthetic inducers of dimerization. 1996. Curr Biol. 6(7):839-47 (Exhibit 29)
MM	Spencer DM, et al. A general strategy for producing conditional alleles of Src-like tyrosine kinases. 1995. Proc. Natl. Acad. Sci. 92:9805-9809 (Exhibit 30)

EXAMINER *mmnich*

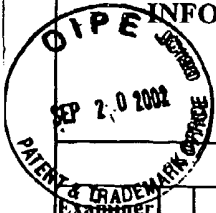
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MM	Stockwell BR, et al. TGF-beta-signaling with small molecule FKBP12 antagonists that bind myristoylated FKBP12- TGF-beta type 1 receptor fusion proteins. 1998. Chem Biol. 5(7):385-95 (Exhibit 31)
MM	Stockwell BR, et al. Probing the role of homomeric and heteromeric receptor interactions in TGF-beta signaling using small molecule dimerizers. 1998. Curr Biol 8(13):761- 70 (Exhibit 32)
MM	Winkler T., et al. Confocal fluorescence coincidence analysis: An approach to ultra high-throughput screening. 1998 Proc. Natl. Acad. Sci. USA 96:1375-1378 (Exhibit 33)
MM	Yang, J., et al. Small-molecule control of insulin and PDGF receptor signaling and the role of membrane attachment. 1997 Curr. Biol. 8:11-18 (Exhibit 34)
MM	Zlokarnik G, et al. Quantitation of transcription and clonal selection of single living cells with beta-lactamase as reporter. 1998, Science 279(5347):84-8 (Exhibit 35)
MM	Search Report dated May 14, 2001 corresponding PCT International Application No. PCT/US01/02285 (Exhibit 36) - Not for Publication

EXAMINER M. Manda	DATE CONSIDERED 7/8/04
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				Filing Date February 25, 2002		Group 15141034	
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MM	Lin, H., et al. Dexamethasone-Methotrexate: An Efficient Chemical Inducer of Protein Dimerization <i>In Vivo</i> . 2000. J.Am.Chem.Soc. 122:4247-4248 (Exhibit 37)						
MM	Kopytek, S.J., et al. Chemically Induced Dimerization of Dihydrofolate Reductase by a Homobifunctional Dimer of Methotrexate. 2000. Chem Biol 7:313- 321 (Exhibit 38)						
MM	U.S. Serial No. 09/768,479, filed January 24, 2001 <i>Not for Publication</i> (Exhibit 39)						
MM	Firestine, S.M., et al. Using an AraC-Based three-hybrid system to detect biocatalysts in vivo. 2000. Nature Biotechnology. 18, 544-547 (Exhibit 40)						
MM	Pelletier, J.N., et al. Oligomerization domain-directed reassembly of active dihydrofolate reductase from rationally designed fragments. 1998. Proc.Natl.Acad.Sci.USA. 95, 12141-12146 (Exhibit 41)						
MM	Ladant, D., Karimova, G. Genetic systems for analyzing protein-protein interactions in bacteria. 2000. Res. Microbiol. 151, 711-720 (Exhibit 42)						
EXAMINER <i>MMannich</i>		DATE CONSIDERED <i>2/8/02</i>					

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January 24, 2002Group
1614INFORMATION DISCLOSURE STATEMENT
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U.S. PATENT DOCUMENTS

Examiner Initial	Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate
	6 2 0 0 7 5 9	March 13, 2001	Dove et al.			
	5 9 2 5 5 2 3	July 20, 1999	Dove et al.			

FOREIGN PATENT DOCUMENTS

Document Number	Date	Country	Class	Subclass	Translation	
					Yes	No

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	U.S. Serial No. 10/056,874, filed January 24, 2002 (Exhibit 45)	} considered, NOT for publication
	U.S. Serial No. 10/132,039, filed April 24, 2002 (Exhibit 46)	

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mm	Amara, J.F. et al. A Versatile Synthetic Dimerizer for the Regulation of Protein-Protein Interactions, <i>Proc. Natl. Acad. Sci. USA</i> , 1997, 94, 10618-10623 (Exhibit 1)

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